Hints

1. To make it easier to debug your program, do not, at first, include the code that reads and writes through the socket in SMTPConnection, but use the stdin and stdout instead. This way, you can test SMTPConnection more easily. You can now send the commands from the terminal, and the program will need to give the correct reply codes. After your program works, add the code to operate the socket.

2. Start by completing the method fetch() and parseHELO(). You will need these two functions in many places.

3. In MessageSave class, you need to handle the message body received by the server; the simplest way to get it right is to investigate a real SMTP connection, or create a fake SMTP server and use mail client to send an email to your fake server, thus you can grab the raw data for testing. But remember to follow the RFC specification.

4. You need to identify message header and message body clearly, or otherwise, information may be lost and the whole message may be corrupted.

5. Don't use a huge file as attachment as the decoding time is long.

6. In the laboratory, server cannot bind port 25 in UNIX platform; you need to use port number higher than 1024 for testing.

7. HELO" AND "EHLO". EHLO is an extension of HELO and supports more commands in addition to the traditional "mail from", "rcpt to", "data"... Command like "AUTH LOGIN",

"STARTTLS" are only supported by the EHLO. But in our project, we don't care about the extension commands.

8. "RSET" and "HELO" These two commands have NEARLY the same semantics. As you known from the project slide(page 19-20), during step 2 to step 8, if the client says HELLO (HELO or EHLO command) again or RSET, the server needs to discard all the previous data (except the saved messages) and restarts from step 2. A "RSET" command may be issued at any time by the client. It is effectively equivalent to a NOOP (i.e., if has no effect) if issued immediately after EHLO, before EHLO is issued in the session, after an end-of-data indicator has been sent and acknowledged, or immediately before a QUIT. An SMTP server MUST NOT close the connection as the result of receiving a RSET; that action is reserved for QUIT. Since EHLO implies some additional processing and response by the server, RSET will normally be more efficient than reissuing that command, even though the formal semantics are the same. (RFC2821) SO, you can see that "HELO" and "RSET" are nearly the same.

9. You should make full use of special characters like "*" to represent any strings.

10. As you may know from the function 'validate' in SMTPConnection, the tested account are at @cs.ust.hk. You can change to other domain like @cse.ust.hk or something else.

11. You MUST NOT just paste all the email information into the message.txt file. This is not a email server but a message copy function.